

INTRODUCTION

In compliance with the National Environmental Policy Act of 1969 (NEPA), the National Park Service (NPS) prepared an Environmental Assessment (EA) to examine alternative actions and environmental impacts associated with the proposed project to rehabilitate the breakwater at Fort Sumter and Fort Moultrie National Historical Park.

The purpose of this proposed project is to further protect Fort Sumter from erosion and structural damage, and to preserve the structure for future generations. This project is needed for the following reasons:

- The historic fort foundation walls have been damaged by wave action and by changes in the existing stone riprap. Where the riprap touches the brick fort walls, it has eroded the brick, resulting in a wavy wall and damage to the brick and mortar. On the side of the fort facing Charleston, there is no riprap, and currently waves break against that side of the fort, resulting in failing brickwork.
- Forecasted sea level rise will pose a threat to the fort in years to come, which may intensify impacts on the fort walls resulting from high wave events.

The statements and conclusions reached in this Finding of No Significant impact are based on documentation and analysis provided in the EA. To the extent necessary, relevant sections of the EA are incorporated by reference below.

SELECTED ALTERNATIVE AND RATIONALE FOR THIS DECISION

Based on the analysis presented in the EA, the NPS selected the Preferred Alternative for implementation.

The selected alternative will consist of moving the existing 1,825 tons of armor stone riprap that is currently positioned against the exterior foundation walls of Fort Sumter approximately 60 feet out into the water and away from the brick walls of the fort to create a lower protective breakwater structure. An approximately 992-foot-long breakwater will be constructed around the left face, right face, and right flank of the fort. The design of the breakwater will allow for overtopping from wave action.

The breakwater will be designed to sit approximately 2 feet above mean higher high water, which includes consideration for sea level rise. Stone riprap will be moved from the existing placement along the fort walls to be reused in the new breakwater location. The breakwater design will have a crest width of three armor stones, for a width of 5.8 feet. The breakwater will have a slope of 1/1.5 on the landward side of the breakwater, and a slope of 0.5 on the seaward side. This will allow wave energy to be dissipated over a greater area and allow for construction of the breakwater with smaller stone. The overall width of the proposed breakwater will be approximately 37.7 feet. Breaks within the breakwater will be incorporated to allow aquatic organisms to escape if trapped behind the breakwater. Final design of the breakwater will be completed following the NEPA process.

A living shoreline will be created between the breakwater and the fort's walls. The living shoreline will be constructed with fill material placed landward of the breakwater up to the fort foundation walls. Sand will be placed at a 1:10 slope from mean low water to mean high water, with a rise of 2–3 feet out of the water at the fort walls to allow access to the walls for maintenance and repair. The area will be filled with sand of a similar grain size to the sand found in Charleston Harbor. Drier and less frequently submerged areas of the living shoreline will be planted with saltmeadow cordgrass (*Spartina patens*). Smooth cordgrass (*Spartina alterniflora*)

will be planted in constantly submerged areas of the living shoreline. Grass plugs for both species will be planted with a 1.5-foot spacing between plugs.

RATIONALE

The NPS selected the Preferred Alternative for implementation because it best meets the purpose and need for the project, which is to further protect Fort Sumter from erosion and structural damage, and to preserve the structure for future generations.

The selected alternative will ensure that cultural resources in the park will remain intact. The construction of the breakwater and living shoreline will provide protection from wave action and allow for maintenance to be performed on the fort's exterior walls. In addition, the living shoreline will create a natural habitat for both terrestrial and aquatic life.

The selected alternative will also improve visitor use and experience because protection of Fort Sumter will prevent long-term impacts to the fort. Protection of the fort foundation walls from erosion will allow for continued visitor access for future generations. The potential decrease in occasional flooding as a result of the new breakwater will improve visitor access and visitor experience.

MITIGATION MEASURES

NPS places strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. The selected alternative incorporates the mitigation measures below.

West Indian Manatee: In order to reduce potential impacts on the West Indian manatee, the following measures will be employed as recommended by U.S. Fish and Wildlife Service (USFWS):

- Instruct personnel associated with the project of the potential presence of manatees and the need to avoid collisions with manatees. Construction personnel must monitor water-related activities for the presence of manatees during May 15 – October 15.
- Advise construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees, which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act.
- Any siltation barriers used during the project should be made of material in which manatees cannot become entangled, must be properly secured, and must be regularly monitored to avoid manatee entrapment.
- Vessels associated with the project shall operate at “no wake/idle” speeds at all times while in the construction area and while in water where the draft of the vessel provides less than a 4-foot clearance from the bottom. Vessels will follow routes of deep water whenever possible.
- If manatee(s) are seen within 100 yards of the active construction area appropriate precautions will be implemented to ensure protection of the manatee(s). These precautions will include operation of all moving equipment no closer than 50 feet to a manatee. Operation of any equipment closer than 50 feet to a manatee will necessitate immediate shutdown of that equipment. Activities will not resume until the manatee(s) has departed the project area of its own volition.
- Any collision with and/or injury to a manatee will be reported immediately to Mr. Jim Valade of the USFWS North Florida Field Office at (904) 731-3116.

Essential Fish Habitat (EFH): In their February 22, 2019 consultation response letter, National Oceanic and Atmospheric Administration (NOAA) Fisheries encourages the use of living shorelines for shoreline stabilization but suggested incorporating breaks in the breakwater to provide escape routes for any aquatic organisms trapped behind the breakwater. NPS will incorporate this suggestion in the design of the breakwater to reduce the potential for stranding of fish species. Measures to reduce impacts to EFH and EFH-designated species include the use of a turbidity curtain or siltation barrier during movement of the stone riprap and placement of fill to reduce impacts to water quality from sediment suspension during construction.

Cultural Resources: Comments and recommendations from the State Underwater Archeologist, James Spirek, were provided in the December 18, 2018, consultation response letter received from the South Carolina State Historic Preservation Office (SHPO). These comments included the following recommendations based on the 2004 *Submerged Cultural Resources Study*:

- Inspect areas around Anomalies A and J for objects of archeological/historical significance during removal of stone riprap.
- Take care around remnants of the wharf, tower, and walkway foundation, including Anomalies B, C, E, and F.
- Avoid damage to Anomalies G and H (purported cannon carriage components) and the marine boiler.

Consultation between NPS and the South Carolina SHPO will continue as plans for the proposed project develop.

PUBLIC INVOLVEMENT/AGENCY CONSULTATION

Public Scoping

The public was notified of the Proposed Breakwater Rehabilitation Project through a news release on November 16, 2018, posted in the Charleston *Post and Courier*, and a newsletter distributed via mail. The press release was also posted on Fort Sumter's website and on social media. The press release notified all interested parties of the availability of the scoping newsletter in the Fort Moultrie and Fort Sumter Visitor Centers and on the NPS Planning, Environment, and Public Comment (PEPC) website. The news release also announced the beginning of the 30-day scoping comment period. The public was encouraged to submit their comments on the Breakwater Rehabilitation Project electronically through the NPS PEPC website and by mailing comments to Fort Sumter and Fort Moultrie National Historical Park. One correspondence from an individual in support of the project was received.

Comments on the Environmental Assessment

The public was notified of the availability of the Proposed Breakwater Rehabilitation EA through a news release on April 3, 2019, posted in the Charleston *Post and Courier*. The news release notified all interested parties of the availability of the EA in the Fort Moultrie and Fort Sumter Visitor Centers and on the NPS PEPC website. The public had the opportunity to submit comments on the EA from April 3 through May 3, 2019. A total of three comments were received from federal and state agencies.

Agency Consultation

Agency scoping was held in an effort to obtain early input on the scope of issues to be addressed in the EA. Scoping letters were sent to the South Carolina Department of Natural Resources, NOAA Fisheries, USFWS, U.S. Army Corps of Engineers Charleston District, U.S. Coast Guard, and South Carolina Department of Health and Environmental Control, Division of Ocean and Coastal Management (SCDHEC-OCRM).

In accordance with federal and state requirements for special-status species, scoping letters were mailed to state and federal agencies on November 15, 2018. These letters provided information on the proposed project and requested information on any federally or state-listed species that could be impacted by the proposed project. A response to the scoping letter was received from the USFWS on November 29, 2018, indicating that the USFWS has no objections to the construction of the breakwater if proper time-of-year restrictions are observed for construction to protect the West Indian manatee. In addition, USFWS requested continued coordination during the design of the living shoreline. The park and design team will coordinate with the USFWS to provide details on the living shoreline prior to construction. A letter from the South Carolina Department of Natural Resources was received on December 17, 2018, indicating the occurrences of listed species in the vicinity of the project area, including the West Indian manatee, shortnose sturgeon (*Acipenser brevirostrum*), Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*), and loggerhead sea turtle (*Caretta caretta*).

A letter was received from NOAA Fisheries on February 22, 2019, indicating that the project will have an impact on EFH due to the loss of sub-tidal non-vegetated flats by either fill or conversion to marine emergent wetlands. NOAA Fisheries also encouraged the use of living shorelines and recognized that this will result in habitat tradeoffs. A second letter was received from NOAA Fisheries on May 2, 2019, requesting that the NPS complete an EFH Assessment to analyze impacts to EFH-designated species. The EA was revised to include an EFH Assessment and was sent to NOAA Fisheries and USFWS for a 30-day review period beginning October 8, 2019. USFWS stated that their recommendations and comments previously submitted regarding the West Indian manatee and the living shoreline had been addressed and had no further comments. NOAA Fisheries also stated that their conservation recommendations for the breakwater design and inclusion of an EFH assessment were addressed.

Section 106 of the National Historic Preservation Act requires that federal agencies take into account the effect of any proposed undertakings on properties that are listed or eligible for listing in the National Register. The NPS sent a letter to the SHPO on November 15, 2018, initiating consultation under Section 106 and requesting any information available on the area potentially affected by the proposed project. Letters were also sent to the Advisory Council on Historic Preservation and Tribal Historic Preservation Officers of the Catawba Indian Nation, Eastern Band of Cherokee Indians, and Seminole Tribe of Florida. A response was received from the Catawba Indian Nation on December 6, 2018, noting no concerns with regard to traditional cultural properties, sacred sites, or Native American archeological sites within the boundary of the proposed project area. A letter was received from the South Carolina SHPO on December 18, 2018, providing comments and questions on the 2004 *Submerged Cultural Resources Study* (Russell 2004). The letter also recommended continued consultation as plans for the proposed project develop. The South Carolina SHPO had the opportunity to review and comment on the EA beginning April 3, 2019. The South Carolina SHPO, in a letter dated May 3, 2019, agreed to a conditional *No Adverse Effect* finding. The NPS will continue consultation with the South Carolina SHPO as project details are developed.

The Coastal Zone Management Act of 1972 was enacted by Congress to balance the competing demands of growth and development with the need to protect coastal resources (16 USC 1451 et seq.). The act encourages states to conduct self-evaluations of their coastal management programs every 5 years to assess significant changes in their coastal resources, management practices, critical needs, and priorities for enhancement. The SCDHEC-OCRM administers the Federal Coastal Zone Management Act and the South Carolina Coastal Management Act (S.C. Code Ann. Section 48-39-10 et seq.).

The NPS initiated consultation with the SCDHEC-OCRM on March 1, 2019. The letter provided information on the proposed project and requested comments on the proposed project. A Coastal Zone Management Act Consistency Determination was sent to SCDHEC-OCRM on April 3, 2019. Concurrence with the Consistency Determination was presumed as pursuant to 15 CFR § 930.41; the SCDHEC-OCRM had 60 days from the receipt of the letter in which to concur with or object to the consistency determination, or to request an extension. Concurrence is presumed if the SCDHEC-OCRM's response is not received by the NPS within 60 days. No response from SCDHEC-OCRM was received.

Native American Tribes Consultation

On November 15, 2019, government-to-government consultation letters were sent to all Tribes affiliated with the park, including the Catawba Indian Nation, the Eastern Band of Cherokee Indians, and the Seminole Tribe of Florida. The Catawba Indian Nation stated in a letter dated December 8, 2018, no immediate concerns with the proposed project. No other comments were received.

FINDING OF NO SIGNIFICANT IMPACT

As described in the EA, the selected alternative has the potential for adverse impacts on special-status species, EFH, cultural landscape, wetlands, and water resources; however, no potential for significant adverse impacts was identified.

The selected alternative will result in construction activities that could cause disturbance to listed species, including increased turbidity, noise impacts, and the potential for harm from the use of heavy equipment in the project area. Best management practices (BMPs) and measures will be taken to ensure that impacts on listed species are minimized; as a result, the proposed action *may affect but is not likely to adversely affect* listed species. Loss of subtidal habitat in the project area will be negligible when considered with the overall amount of subtidal habitat present in the vicinity of the site.

The selected alternative will result in construction activities that could cause disturbance to EFH species, including increased turbidity, noise impacts, and the potential for harm from the use of heavy equipment in the project area and from movement and placement of the stone riprap and addition of fill. BMPs, such as turbidity curtains and time-of-year restrictions and other measures will be taken to ensure that impacts on EFH-designated species are minimized; as a result, the proposed action will be unlikely to have more than minor adverse effects. Loss of subtidal habitat in the project area will be negligible when considered with the overall amount of subtidal habitat present in the vicinity of the site, and the creation of salt marsh habitat will provide additional benefit to several EFH species. EFH species are managed under the Magnuson-Stevens Act; pursuant to the requirements of this act and its implementing regulations, it is anticipated that there will be minimal impact on habitats designated as EFH.

The selected alternative will have both adverse and beneficial impacts on elements of the cultural landscape. The changes to the stone riprap will adversely impact a contributing

resource, but this resource will still be present at the site in a function similar to the original purpose. Protection of the fort foundation walls from further deterioration will protect this important resource, resulting in a beneficial impact on the cultural landscape. In addition, the removal of the riprap and development of a living shoreline will allow easier access to the fort walls for maintenance. This will allow the walls to be repaired more regularly, protecting this important feature and resulting in beneficial impacts. Development of the living shoreline and movement of the breakwater is not expected to impact the historic viewshed from the fort or looking towards Fort Sumter from Fort Moultrie.

The selected alternative will result in the conversion of subtidal habitat and intertidal wetland habitat to intertidal salt marsh wetlands and rocky intertidal wetlands within the project area. The existing riprap wall at the base of the fort foundation walls will be moved into open water, impacting rocky shoreline habitat. The addition of a living shoreline will increase salt marsh wetlands and provide habitat for both marine and estuarine species. Although approximately 1 acre of wetlands will be permanently lost, approximately 2.8 acres of wetland will be created by the project, resulting in a net gain of wetland habitat and long-term beneficial impacts to this resource. Construction will temporarily increase turbidity in the project area, which could impact wetland habitat, but an effort will be made to minimize these impacts using BMPs outlined in Procedural Manual 77-1: *Wetland Protection*. Overall, wetlands within the project area will increase by 1.8 acres.

Short-term adverse impacts on water quality will occur during construction activities due to increased turbidity from movement of the riprap. These impacts will be minimized through the use of BMPs to reduce sediment disturbance. In the long term, the development of the living shoreline will retain sediments and other particulates, improving water quality at Fort Sumter.

NPS analyzed other past, present, or reasonably foreseeable future actions for their potential to contribute to cumulative impacts associated with the implementation of the selected alternative. No cumulative impacts are expected.

There will be no significant impacts on public health, safety, or unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative impacts, or elements of precedence were identified. Implementation of the NPS selected alternative will not violate any federal, state, or local environmental protection law.

CONCLUSION

As described above, the selected alternative does not constitute an action meeting the criteria that normally require preparation of an Environmental Impact Statement. The selected alternative will not have a significant effect on the human environment in accordance with Section 102(2)(c) of NEPA.

Based on the foregoing, it has been determined that an Environmental Impact Statement is not required for this project and, thus, will not be prepared.

ATTACHMENT A: NON-IMPAIRMENT DETERMINATION

WHY IS A NON-IMPAIRMENT DETERMINATION REQUIRED?

Section 1.4.7 of National Park Service (NPS) *Management Policies 2006* states that:

[b]efore approving a proposed action that could lead to an impairment of park resources and values, and NPS decision-maker must consider the impacts of the proposed action and determine, in writing, that the activity will not lead to an impairment of park resources and values.

Actions that require preparation of Environmental Assessments and Environmental Impact Statements constitute actions that may have the potential to impair park resources or values. Therefore, a non-impairment determination must be made for any action selected in the Finding of No Significant Impact or Record of Decision that could affect park resources and values and to which the NPS is a signatory. The non-impairment determination is completed only for the selected alternative.

WHAT IS IMPAIRMENT?

Sections 1.4.5 and 1.4.6 of *Management Policies 2006* provide an explanation of impairment. Section 1.4.5 defines impairment as:

an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values.

Section 1.4.5 goes on to state that:

[a]n impact to any park resource or value may, but do not necessarily, constitute impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park,
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or
- Identified as a goal in the park's general management plan or other relevant NPS planning documents as being of significance.

An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and it cannot be further mitigated.

Section 1.4.6 of *Management Policies 2006* identifies the park resources and values that are subject to the no-impairment standard:

The "park resources and values" that are subject to the no-impairment standard include:

- The park's scenery, natural and historic objects, and wildlife, and the processes and condition that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources;

- soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structure, and objects; museum collections; and native plants and animals;
- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- the park’s role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

HOW IS NON-IMPAIRMENT DETERMINATION MADE?

Section 1.4.7 of *Management Policies 2006* states that

[I]n making a determination of whether there would be an impairment, an NPS decision maker must use his or her professional judgment. This means that the decision-maker must consider any environmental assessments or environmental impact statements required by the National Environmental Policy Act of 1969 (NEPA); consultations required under Section 106 of the National Historic Preservation Act (NHPA); relevant scientific and scholarly studies; advice or insights offered by subject matter experts and others who have relevant knowledge or experience; and the results of civic engagement and public involvement activities relating to the decision.

Management Policies 2006 further define “professional judgment” as

a decision or opinion that is shaped by study and analysis and full consideration of all the relevant facts, and that takes into account the decision-maker’s education, training, and experience; advice or insights offered by subject matter experts and others who have relevant knowledge and experience; good science and scholarship; and, whenever appropriate, the results of civic engagement and public involvement activities relation to the decision.

NON-IMPAIRMENT DETERMINATION FOR THE SELECTED ALTERNATIVE

The determination of impairment has been prepared for the selected alternative described in the Finding of No Significant Impact. An impairment determination is made for all resource impact topics analyzed for the selected alternative.

Special-Status Species

Implementing the selected alternative will not create long-term adverse impacts to special-status species. Short-term minor adverse impacts will occur from the disturbance of some species due to the increase in turbidity, noise impacts, and the potential harm from the use of heavy equipment in the project area. To minimize these short-term impacts, best management practices and mitigation measures will be taken. Given these conditions, it was determined that the selected alternative *may affect but is not likely to adversely affect* listed sea turtles, piping plover (*Charadrius melodus*), least tern (*Sternula antillarum*), West Indian manatee (*Trichechus manatus*), Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*), or shortnose sturgeon (*Acipenser brevirostrum*). Given the limited adverse effects on listed species, and the Section 7 of the Endangered Species Act determination, no impairment to the park’s special-status species is expected.

Essential Fish Habitat

Implementing the selected alternative will not create long-term, adverse impacts to essential fish habitat (EFH). EFH species will be impacted temporarily due to increases in turbidity, noise impacts, and the potential for harm from the use of heavy equipment. To minimize impacts during construction, turbidity curtains and time-of-year restrictions will be implemented. Given the limited adverse effects on EFH, no impairment to habitats designated as EFH is expected. The creation of salt marsh habitat will benefit several EFH species.

Cultural Landscapes

The significance of the park is that Fort Sumter is where one of our Nation's most critical defining moments, the American Civil War, began. Fort Sumter is also the most heavily bombarded site in the western hemisphere as a result of the Union forces' attempt to gain control of Charleston Harbor. It was and is a powerful symbol to both the North and South, and it remains a memorial to all who fought to hold it. The purpose of the park is to preserve the Civil War remnants of Fort Sumter and to commemorate and interpret the opening battle of the Civil War and Fort Sumter's role during the civil war.

Implementing the selected alternative will have both adverse and beneficial impacts on elements of the cultural landscape. The addition of the breakwater and living shoreline will change the characteristic of the cultural landscape of Fort Sumter. The historic viewshed both of the fort from the water and looking out from the fort will be altered. However, the living shoreline will not impair the viewshed to Fort Moultrie, as the living shoreline will not be largely visible from the top of the fort or will not restrict the view. In addition, views from Fort Moultrie to Fort Sumter will not be impacted, as the breakwater and living shoreline will have the same visibility as the existing riprap. The changes to the riprap will adversely impact a contributing resource, but this resource will still be present at the site in a function similar to the original purpose. The protection of the fort walls and increased maintenance accessibility will have a beneficial impact to the cultural landscape. Because impacts will generally not be visible and will ensure protection of the fort, the selected alternative will not result in impairment to the cultural landscape.

Wetlands and Floodplain

Implementing the selected alternative will have both beneficial and adverse impacts to wetlands. Approximately 0.9 acre of rocky intertidal wetlands, 0.1 acre of emergent salt marsh, and less than 0.1 acre of a sandy intertidal wetland with an unconsolidated bottom (sandy beach) will be permanently impacted by the removal of the rock next to the fort and placement of the rock into open water and construction of the living shoreline. Overall, approximately 1 acre of wetlands will be permanently altered by the selected alternative. However, the breakwater construction will create approximately 1.2 acres of rocky intertidal wetland habitat, and construction of the living shoreline will create approximately 1.6 acres of salt marsh habitat. The development of salt marsh in the project area will create approximately 1.64 acres of salt marsh wetland habitat at Fort Sumter, providing long-term beneficial impacts. This will increase overall wetland acreage in the project area by 1.8 acres, or a 56 percent increase in wetlands, and provide additional native vegetation and habitat. The project area is located within the 100-year floodplain; however, the floodplain would not be altered. Development of the living shoreline within the floodplain has the potential to reduce flooding inside the fort during high tides. Overall, impacts on wetlands and floodplains in the project area will be long-term beneficial, but short-term adverse impacts will occur to wetlands and the floodplain during the construction

period. Because there will be no net loss to wetlands, the selected alternative will not result in impairment to wetlands or floodplains.

Water Resources

Implementing the selected alternative will have short-term adverse impacts to water resources. The breakwater rehabilitation and construction of a living shoreline will have both short- and long-term impacts on water quality in the project area. Construction activities associated with the proposed action will result in short-term adverse impacts on water quality. The process of moving the existing riprap into the open water will disturb sediments and increase turbidity. Best management practices will be used to minimize impacts on water quality from construction. Once the living shoreline is established it will result in long-term benefits to water quality through the reduction in sedimentation and removal of contaminants and nutrients. Given the short-term adverse effects to water quality and the fact that benefits to water quality are expected, the selected alternative will not result in impairment to water resources.

**ENVIRONMENTAL ASSESSMENT
FOR THE PROPOSED REHABILITATION OF THE BREAKWATER AT
FORT SUMTER NATIONAL MONUMENT**

ERRATA

The following changes have been made to the Environmental Assessment (EA) for the *Proposed Rehabilitation of the Breakwater at Fort Sumter National Monument, March 2019*.

General Changes:

The EA has been revised to address concerns identified by the National Oceanic and Atmospheric Administration, National Marine Fisheries (NMFS) in their February 22 and May 2, 2019, correspondence. Specifically, the proposed breakwater has been revised to incorporate breaks or openings in the hard structural elements to facilitate natural flushing and allow aquatic organisms to access nearshore and shoreline habitat. The breaks/openings will also allow aquatic organisms escape routes if trapped behind the breakwater during high tide or storm events.

As required by National Park Service (NPS) Director's Order 12, the following errata sheet responds to all substantive comments submitted on the Environmental Assessment (EA) for the Fort Pickens Road Realignment.

Substantive comments from various individuals and organizations have been consolidated and paraphrased for purposes of this document. The comments, with NPS' responses, are set forth below.

1. Comment – The EA does not include all the required components of an EFH (Essential Fish Habitat) assessment, specifically items (ii), (iii), and (iv) and potentially items (v) through (viii). The NPS should amended the EA to address this deficiency, or the NPS should separately pursue consultation with the NMFS under the Magnuson-Stevens Act by submitting a stand-alone EFH assessment.

The NPS has amended the EA to include a formal EFH assessment which can be located on page 16 of the revised EA, *Proposed Rehabilitation of the Breakwater at Fort Sumter National Monument, October 2019*

2. Comment – The breakwater should include breaks or openings to facilitate natural flushing and allow aquatic organisms to access nearshore and shoreline habitat. The NMFS can assist NPS with determining the number, sizes, and locations of the openings.

NPS has revised the proposed/selected action to incorporate breaks/openings in the hard structural elements to facilitate natural flushing and allow aquatic organisms to access nearshore and shoreline habitat. The breaks/openings will also allow aquatic organisms escape routes if

trapped behind the breakwater during high tide or storm events. Further consultation with NMFS will occur as the selected action is developed for implementation.